UCLouvain

lepl1507

2026

Project 4 (in applied mathematics)

5.00 credits	30.0 h + 22.5 h	Q2

Teacher(s)	Hendrickx Julien ;Krings Gautier (compensates Hendrickx Julien) ;Massart Estelle ;
Language :	French
Place of the course	Louvain-la-Neuve
Learning outcomes	
Evaluation methods	The final grade will depend on · the grade obtained for the project, including the achievements and realization, the written document produced, the oral presentations and interactions, work organization and the reflexion on this organization, and the mastery of the topics and concepts related to the project. This part of the grade can be individualized depending the student implication in his/her group during the semester (compulsory attendance, participation to activities, intermediate works, and graded production). The activities related to this part of the grade cannot be re-taken in second session. · the grade obtained for an individual written test taking place outside of the exam period. The weight of the grade for the written test will be 25% if the grade is 10 or more, and 100% if the grade is 6 or less. For grade between 6 and 10, it will depend linearly on the grade according to : weight = 1 - 0.75*(grade - 6)/4 The second session will consist in an individual exam, that may require preparing individual works beforehand.
Teaching methods	Work in small groups, supervised by a tutor. Regular presentations of progress. (Students will be encouraged to write their reports or defend their project in English)
Content	The students will face a technological problem where mathematics have a strong input. They will develop competences like: · Understand a given problem; · Model (mathematically) an industrial problem; · Establish a bibliographic study; · Write specifications; · Work in a team; · Apply adequate methods to solve problems; · Develop algorithms and write code (Python, C++, etc.); · Make plausible simulations; · Propose solutions to an open problem and criticise them; · Evaluate the performances of the proposed solutions; · Write a professional report; · Present the solutions during an oral presentation.
Other infos	This course is part of the set of “Project 4” courses of the baccalaureate program in civil engineering. Projects 4 share common transversal objectives but are broken down into various versions with distinct disciplinary objectives, corresponding to the program streams. Each student chooses the project proposed by one of his/her fields. **Important note concerning generative AI:** Using generative AI like chatGPT is tolerated provided that they are used for assistance purpose in the scope of writing the requested reports of this class. If the student chooses to use one or several AI (or any other online tool), he or she has to systematically indicate every part of the document subject to this usage, for instance using footnotes. The student will specify if the AI has been used to search information, write, improve and/or correct text. The student will mension what AI has been used (chatGPT, Bing, Bard, Chatsonic, etc.) and at what date he or she made use of it. External information sources (including litteral citation of AI-generated text) must be cited in accordance with bibliographic referencing standards. The student remains responsible of the content of his or her document, independently to used sources. Any behavior on the part of the student that prevents or attempts to prevent, in whole or in part, a correct assessment of his or her knowledge, skills and/or competencies will be considered an irregularity which could result in sanctions.
Faculty or entity in charge	MAP

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Bachelor in Engineering	FSA1BA	5		🔍